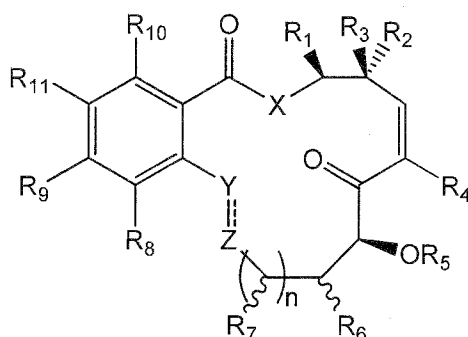


**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listing of claims in the application.

***Listing of Claims***

1. (currently amended) A pharmaceutical composition for systemic administration comprising a pharmaceutically suitable carrier or diluent and a compound having the structure:



or a pharmaceutically acceptable salt or ester thereof; wherein

R<sub>1</sub> is hydrogen, C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>2</sub>-C<sub>20</sub> alkenyl, C<sub>2</sub>-C<sub>20</sub> alkynyl, C<sub>1</sub>-C<sub>20</sub> heteroalkyl, C<sub>2</sub>-C<sub>20</sub> heteroalkenyl, C<sub>2</sub>-C<sub>20</sub> heteroalkynyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkenyl, C<sub>3</sub>-C<sub>20</sub> cycloalkynyl, C<sub>3</sub>-C<sub>20</sub> heterocycloalkyl, C<sub>3</sub>-C<sub>20</sub> heterocycloalkenyl, C<sub>3</sub>-C<sub>20</sub> heterocycloalkynyl, C<sub>3</sub>-C<sub>14</sub> aryl or C<sub>3</sub>-C<sub>14</sub> heteroaryl;

R<sub>2</sub> is methyl;

R<sub>3</sub> is hydrogen or halogen;

R<sub>4</sub> is hydrogen or halogen;

R<sub>5</sub> is hydrogen or an oxygen protecting group;

R<sub>6</sub> is hydrogen, hydroxyl, or hydroxyl with an oxygen protecting group;

n is 1;

R<sub>7</sub> is hydrogen;

R<sub>8</sub> is hydrogen, halogen, hydroxyl, hydroxyl with an oxygen protecting group, or alkyloxy;

R<sub>9</sub> is hydrogen, halogen, hydroxyl, hydroxyl with an oxygen protecting group, OR<sub>12</sub>, SR<sub>12</sub>, NR<sub>12</sub>R<sub>13</sub>, -X<sub>1</sub>(CH<sub>2</sub>)<sub>p</sub>X<sub>2</sub>-R<sub>14</sub>, or is lower alkyl optionally substituted with hydroxyl, hydroxyl with an oxygen protecting group, halogen, amino, protected amino, or -X<sub>1</sub>(CH<sub>2</sub>)<sub>p</sub>X<sub>2</sub>-R<sub>14</sub>;

wherein  $R_{12}$  and  $R_{13}$  are, independently for each occurrence, hydrogen,  $C_1$ - $C_{20}$  alkyl,  $C_2$ - $C_{20}$  alkenyl,  $C_2$ - $C_{20}$  alkynyl,  $C_1$ - $C_{20}$  heteroalkyl,  $C_2$ - $C_{20}$  heteroalkenyl,  $C_2$ - $C_{20}$  heteroalkynyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_3$ - $C_{20}$  cycloalkenyl,  $C_3$ - $C_{20}$  cycloalkynyl,  $C_3$ - $C_{20}$  heterocycloalkyl,  $C_3$ - $C_{20}$  heterocycloalkenyl,  $C_3$ - $C_{20}$  heterocycloalkynyl,  $C_3$ - $C_{14}$  aryl or  $C_3$ - $C_{14}$  heteroaryl; or a nitrogen or oxygen protecting group, or  $R_{12}$  and  $R_{13}$ , taken together may form a saturated or unsaturated cyclic ring of 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of  $R_{12}$  and  $R_{13}$  are optionally further substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein  $X_1$  and  $X_2$  are each independently absent, or are oxygen, NH, or -N(alkyl), or wherein  $X_2$ - $R_{14}$  together are  $N_3$  or are a saturated or unsaturated heterocyclic moiety;

p is 2-10, and

$R_{14}$  is hydrogen, or a  $C_3$ - $C_{14}$  aryl,  $C_3$ - $C_{14}$  heteroaryl,  $C_1$ - $C_{20}$  alkyl( $C_3$ - $C_{14}$ )aryl, or  $C_1$ - $C_{20}$  alkyl( $C_3$ - $C_{14}$ )heteroaryl moiety, or is  $-(C=O)NHR_{15}$ ,  $-(C=O)OR_{15}$ , or  $-(C=O)R_{15}$ , wherein each occurrence of  $R_{15}$  is independently hydrogen,  $C_1$ - $C_{20}$  alkyl,  $C_2$ - $C_{20}$  alkenyl,  $C_2$ - $C_{20}$  alkynyl,  $C_1$ - $C_{20}$  heteroalkyl,  $C_2$ - $C_{20}$  heteroalkenyl,  $C_2$ - $C_{20}$  heteroalkynyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_3$ - $C_{20}$  cycloalkenyl,  $C_3$ - $C_{20}$  cycloalkynyl,  $C_3$ - $C_{20}$  heterocycloalkyl,  $C_3$ - $C_{20}$  heterocycloalkenyl,  $C_3$ - $C_{20}$  heterocycloalkynyl,  $C_3$ - $C_{14}$  aryl or  $C_3$ - $C_{14}$  heteroaryl; or  $R_{14}$  is  $-SO_2(R_{16})$ , wherein  $R_{16}$  is a  $C_1$ - $C_{20}$  alkyl,  $C_2$ - $C_{20}$  alkenyl or  $C_2$ - $C_{20}$  alkynyl moiety, wherein one or more of  $R_{14}$ ,  $R_{15}$ , or  $R_{16}$  are optionally substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

$R_{10}$  is hydroxyl, hydroxyl with an oxygen protecting group, or amino;

$R_{11}$  is hydrogen;

X is O;

Y is  $CHR_{17}$  or  $CR_{17}$ ; and Z is  $CHR_{18}$  or  $CR_{18}$ ;

wherein each occurrence of  $R_{17}$  and  $R_{18}$  is hydrogen and wherein Y and Z may be connected by a single or double bond;

wherein oxygen protecting groups are selected from the group consisting of methyl ethers, methoxymethyl ether, methylthiomethyl ether, benzyloxymethyl ether, p-methoxybenzyloxymethyl ether, ethyl ethers, benzyl ethers, silyl ethers, trimethylsilyl ether, triethylsilyl ether, triisopropylsilyl ether, t-butyl dimethylsilyl ether, tribenzyl silyl ether, t-butyl diphenyl silyl ether, esters, formate, acetate, benzoate, trifluoroacetate, dichloroacetate, carbonates, cyclic acetals and ketals and wherein nitrogen protecting groups are selected from the group consisting of carbamates, ~~Troc~~ 2,2,2-trichloroethoxycarbonyl, amides, cyclic imides, N-alkyl amines, N-aryl amines, imines, and enamines; and wherein C<sub>3</sub>-C<sub>14</sub> heteroaryl moieties are selected from cyclic aromatic moieties having from five to ten ring atoms of which one ring atom is selected from S, O and N; zero, one or two ring atoms are additional heteroatoms independently selected from S, O and N; and the remaining ring atoms are carbon.

2. (previously presented) The composition of claim 1, wherein:

R<sub>1</sub> is hydrogen, straight or branched lower alkyl, straight or branched lower heteroalkyl, or C<sub>3</sub>-C<sub>14</sub> aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more halogen, hydroxyl or hydroxyl with an oxygen protecting group;

R<sub>3</sub> is hydrogen;

R<sub>9</sub> is hydrogen, halogen, hydroxyl, hydroxyl with an oxygen protecting group, OR<sub>12</sub>, SR<sub>12</sub>, NR<sub>12</sub>R<sub>13</sub>, -X<sub>1</sub>(CH<sub>2</sub>)<sub>p</sub>X<sub>2</sub>-R<sub>14</sub>, or is lower alkyl optionally substituted with hydroxyl, hydroxyl with an oxygen protecting group, halogen, amino, protected amino, or -X<sub>1</sub>(CH<sub>2</sub>)<sub>p</sub>X<sub>2</sub>-R<sub>14</sub>;

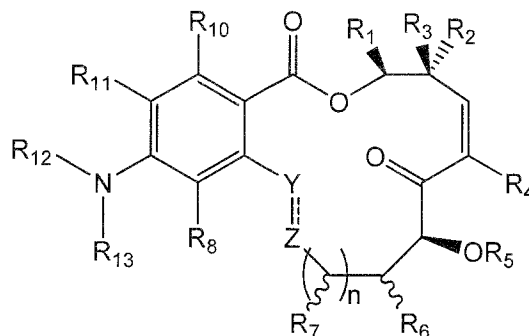
wherein R<sub>12</sub> and R<sub>13</sub> are, independently for each occurrence, hydrogen, lower alkyl, C<sub>3</sub>-C<sub>14</sub> aryl, C<sub>3</sub>-C<sub>14</sub> heteroaryl, alkyl(C<sub>3</sub>-C<sub>14</sub>)aryl, or alkyl(C<sub>3</sub>-C<sub>14</sub>)heteroaryl, or a nitrogen or oxygen protecting group, or R<sub>12</sub> and R<sub>13</sub>, taken together may form a saturated or unsaturated cyclic ring of 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R<sub>12</sub> and R<sub>13</sub> are optionally further substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein  $X_1$  and  $X_2$  are each independently absent, or are oxygen, NH, or -N(alkyl), or wherein  $X_2$ - $R_{14}$  together are  $N_3$  or are a saturated or unsaturated heterocyclic moiety,  $p$  is 2-10, and

$R_{14}$  is hydrogen, or a  $C_3$ - $C_{14}$  aryl,  $C_3$ - $C_{14}$  heteroaryl, alkyl( $C_3$ - $C_{14}$ )aryl, or alkyl( $C_3$ - $C_{14}$ )heteroaryl moiety, or is  $-(C=O)NHR_{15}$ ,  $-(C=O)OR_{15}$ , or  $-(C=O)R_{15}$ , wherein each occurrence of  $R_{15}$  is independently hydrogen, alkyl, heteroalkyl,  $C_3$ - $C_{14}$  aryl,  $C_3$ - $C_{14}$  heteroaryl, alkyl( $C_3$ - $C_{14}$ )aryl, or alkyl( $C_3$ - $C_{14}$ )heteroaryl, or  $R_{14}$  is  $-SO_2(R_{16})$ , wherein  $R_{16}$  is an alkyl moiety, wherein one or more of  $R_{14}$ ,  $R_{15}$ , or  $R_{16}$  are optionally substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; and  $R_{10}$  is hydroxyl.

3. (canceled)
4. (original) The composition of claim 2, where  $R_4$  is halogen.
5. (previously presented) The composition of claim 2, where  $R_4$  is hydrogen.
6. (original) The composition of claim 2, where Y and Z together represent  $-CH=CH-$ .
7. (original) The composition of claim 2, where Y and Z together represent trans  $-CH=CH-$ .
8. (previously presented) The composition of claim 2, wherein  $R_1$  is methyl.
9. (canceled)
10. (original) The composition of claim 8, wherein  $R_4$  is halogen.
11. (original) The composition of claim 8, wherein Y and Z together represent  $-CH=CH-$ .
12. (previously presented) The composition of claim 8, wherein  $R_4$  is hydrogen and Y and Z together represent  $-CH=CH-$ .

13. (original) The composition of claim 11 or 12 wherein -CH=CH- is trans.
14. (currently amended) A pharmaceutical composition for systemic administration comprising a pharmaceutically suitable carrier or diluent and a compound having the structure:



or a pharmaceutically acceptable salt or ester thereof; wherein

R<sub>1</sub> is hydrogen, straight or branched lower alkyl, straight or branched lower heteroalkyl, or C<sub>3</sub>-C<sub>14</sub> aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more halogen, hydroxyl or hydroxyl with an oxygen protecting group;

R<sub>2</sub> is methyl;

R<sub>3</sub> is hydrogen or halogen;

R<sub>4</sub> is hydrogen or halogen;

R<sub>5</sub> is hydrogen or an oxygen protecting group;

R<sub>6</sub> is hydrogen, hydroxyl, or hydroxyl with an oxygen protecting group;

n is 1;

R<sub>7</sub> is hydrogen;

R<sub>8</sub> is hydrogen, halogen, hydroxyl, hydroxyl with an oxygen protecting group, or alkyloxy;

R<sub>12</sub> and R<sub>13</sub> are, independently for each occurrence, hydrogen, lower alkyl, C<sub>3</sub>-C<sub>14</sub> aryl, C<sub>3</sub>-C<sub>14</sub> heteroaryl, alkyl(C<sub>3</sub>-C<sub>14</sub>)aryl, or alkyl(C<sub>3</sub>-C<sub>14</sub>)heteroaryl, or a nitrogen or oxygen protecting group, or R<sub>12</sub> and R<sub>13</sub>, taken together may form a saturated or unsaturated cyclic ring of 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R<sub>12</sub> and R<sub>13</sub> are optionally further substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

R<sub>10</sub> is hydroxyl, hydroxyl with an oxygen protecting group, or amino;

R<sub>11</sub> is hydrogen;

Y is CHR<sub>17</sub> or CR<sub>17</sub>; and Z is CHR<sub>18</sub> or CR<sub>18</sub>;

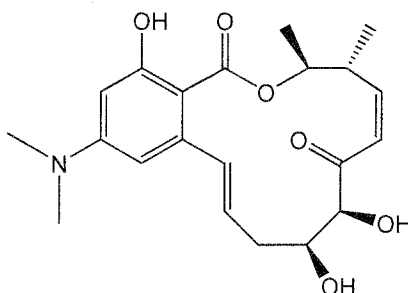
wherein each occurrence of R<sub>17</sub> and R<sub>18</sub> is hydrogen wherein Y and Z may be connected by a single or double bond;

wherein oxygen protecting groups are selected from the group consisting of methyl ethers, methoxymethyl ether, methylthiomethyl ether, benzyloxymethyl ether, p-methoxybenzyloxymethyl ether, ethyl ethers, benzyl ethers, silyl ethers, trimethylsilyl ether, triethylsilyl ether, triisopropylsilyl ether, t-butyldimethylsilyl ether, tribenzyl silyl ether, t-butyldiphenyl silyl ether, esters, formate, acetate, benzoate, trifluoroacetate, dichloroacetate, carbonates, cyclic acetals and ketals and wherein nitrogen protecting groups are selected from the group consisting of carbamates, Troc 2,2,2-trichloroethoxycarbonyl, amides, cyclic imides, N-alkyl amines, N-aryl amines, imines, and enamines; and wherein C<sub>3</sub>-C<sub>14</sub> heteroaryl moieties are selected from cyclic aromatic moieties having from five to ten ring atoms of which one ring atom is selected from S, O and N; zero, one or two ring atoms are additional heteroatoms independently selected from S, O and N; and the remaining ring atoms are carbon.

15. (canceled)
16. (original) The composition of claim 14, wherein R<sub>4</sub> is halogen.
17. (original) The composition of claim 14, wherein Y and Z together represent -CH=CH-.
18. (previously presented) The composition of claim 14, wherein R<sub>1</sub> is methyl.
19. (previously presented) The composition of claim 14, wherein R<sub>1</sub> is methyl, R<sub>4</sub> is hydrogen, and Y and Z together represent -CH=CH-.
20. (original) The composition of claim 17 or 19, wherein -CH=CH- is trans.

21-22. (canceled)

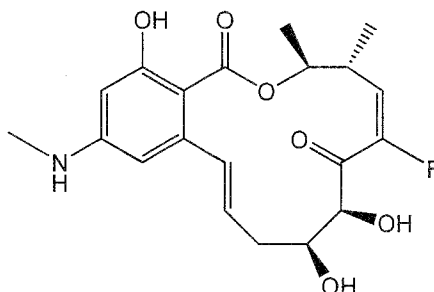
23. (previously presented) The composition of claim 14, wherein the compound has the structure:



or a pharmaceutically acceptable salt or ester thereof.

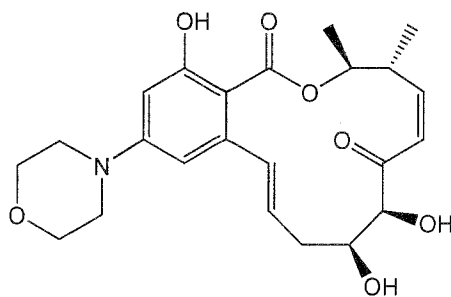
24-26. (canceled)

27. (previously presented) The composition of claim 14, wherein the compound has the structure:



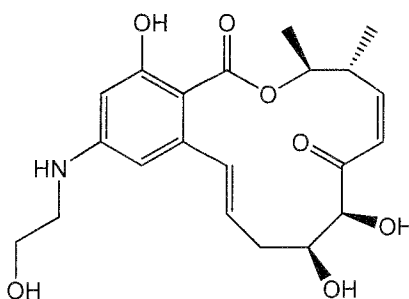
or a pharmaceutically acceptable salt or ester thereof.

28. (previously presented) The composition of claim 14, wherein the compound has the structure:



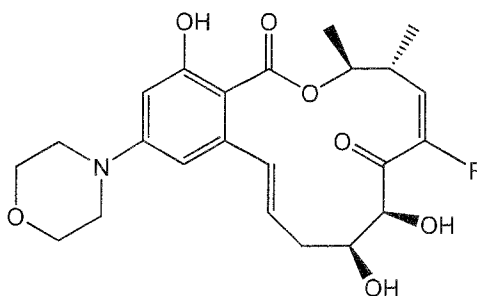
or a pharmaceutically acceptable salt or ester thereof.

29. (previously presented) The composition of claim 14, wherein the compound has the structure:



or a pharmaceutically acceptable salt or ester thereof.

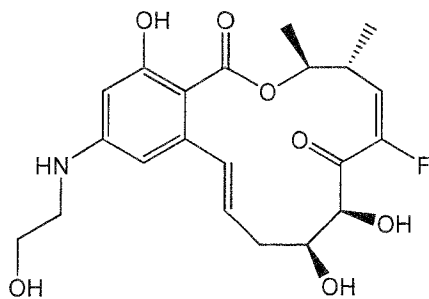
30. (previously presented) The composition of claim 14, wherein the compound has the structure:



or a pharmaceutically acceptable salt or ester thereof.

31. (previously presented) The composition of claim 14, wherein the compound has the structure:

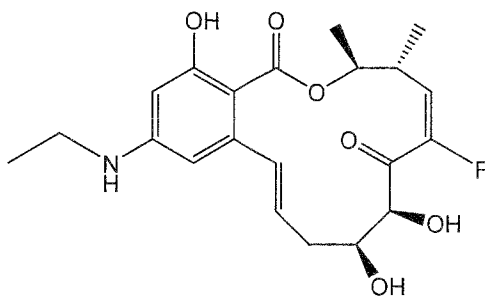




or a pharmaceutically acceptable salt or ester thereof.

32. (canceled)

33. (previously presented) The composition of claim 14, wherein the compound has the structure:



or a pharmaceutically acceptable salt or ester thereof.

34-45. (canceled)

46. (withdrawn, previously presented) The composition of claim 2, where R<sub>1</sub> is methyl.

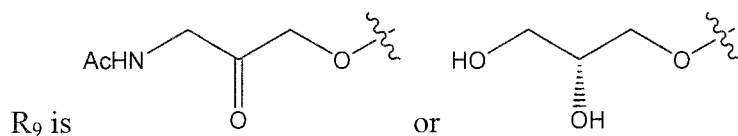
47. (withdrawn, previously presented) The composition of claim 2, where R<sub>4</sub> is halogen.

48. (withdrawn) The composition of claim 2, where R<sub>4</sub> is hydrogen.

49. (withdrawn) The composition of claim 2, where R<sub>5</sub> is hydrogen.

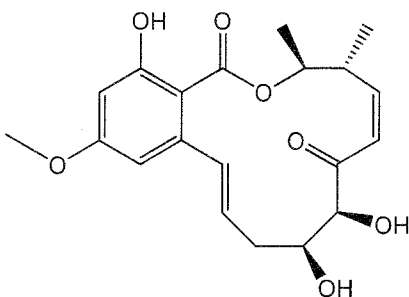
50. (withdrawn) The composition of claim 2, where R<sub>6</sub> is hydroxyl.

51. (canceled)
52. (withdrawn, previously presented) The composition of claim 1, where  $R_8$  is hydrogen.
53. (withdrawn, previously presented) The composition of claim 2, where  $R_9$  is hydroxyl, hydroxyl with an oxygen protecting group,  $-OR_{12}$ ,  $-NR_{12}R_{13}$ , or  $-O(CH_2)_pX_2-R_{14}$ , wherein  $R_{12}$ ,  $R_{13}$ ,  $R_{14}$  and  $X_2$  are as defined in claim 2.
54. (withdrawn, currently amended) The composition of claim 53, where  $R_9$  is  $-OR_{12}$ , wherein  $R_{12}$  is methyl, ethyl, propyl, isopropyl, butyl, Bn benzyl, PMB (MPM) para-methoxybenzyl, 3,4-ClBn 3,4-dichlorobenzyl, or



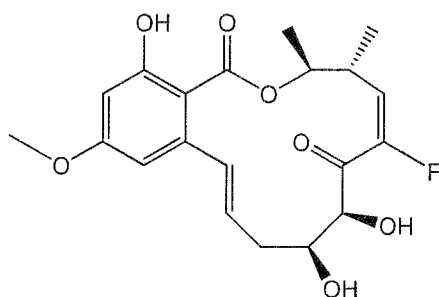
55.-61. (canceled)

62. (previously presented) The composition of claim 1 wherein the compound has the structure:



or a pharmaceutically acceptable salt or ester thereof.

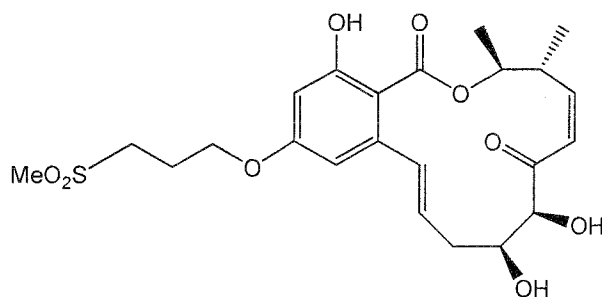
63. (previously presented) The composition of claim 1 wherein the compound has the structure:



or a pharmaceutically acceptable salt or ester thereof.

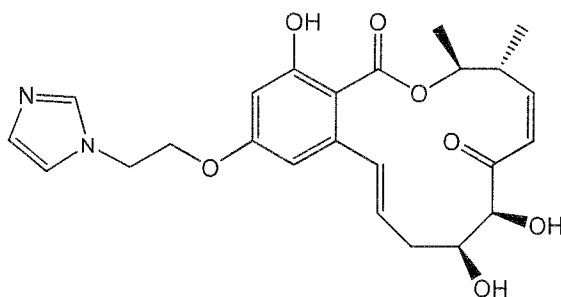
64. (canceled)

65. (previously presented) The composition of claim 1 wherein the compound has the structure:



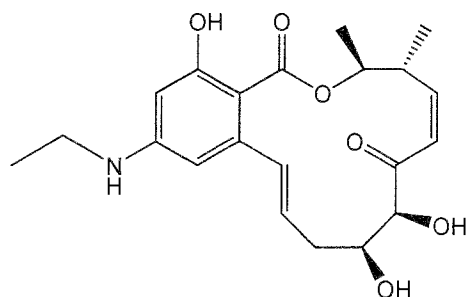
or a pharmaceutically acceptable salt or ester thereof.

66. (previously presented) The composition of claim 1 wherein the compound has the structure:



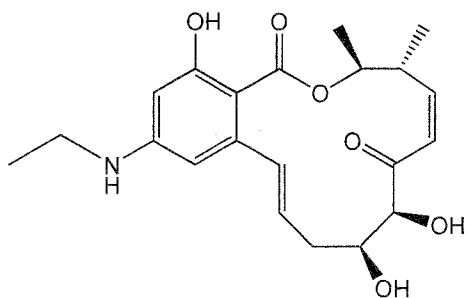
or a pharmaceutically acceptable salt or ester thereof.

67. (previously presented) A pharmaceutical composition for systemic administration comprising a pharmaceutically suitable carrier or diluent and a compound having the structure:

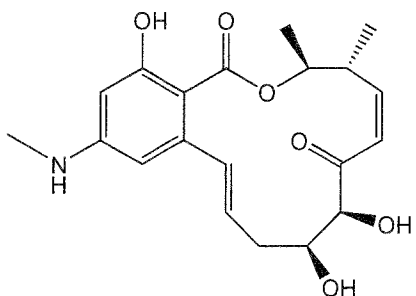


or a pharmaceutically acceptable salt, ester, or salt of ester thereof.

68. (previously presented) The composition of claim 67, wherein the compound is:

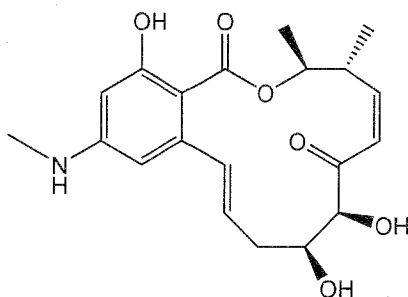


69. (previously presented) A pharmaceutical composition for systemic administration comprising a pharmaceutically suitable carrier or diluent and a compound having the structure:

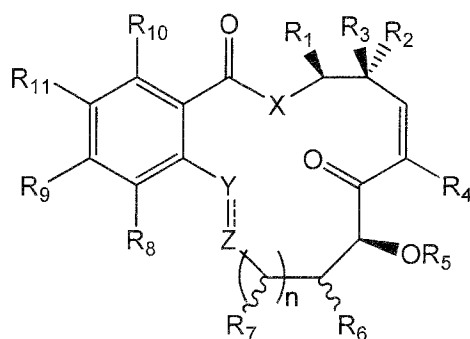


or a pharmaceutically acceptable salt, ester, or salt of ester thereof.

70. (previously presented) The composition of claim 69, wherein the compound is:



71. (previously presented) The composition of claim 2, wherein  $R_4$ ,  $R_5$  and  $R_8$  are hydrogen,  $R_6$  and  $R_{10}$  are hydroxyl, and Y and Z together represent trans -CH=CH-.
72. (previously presented) The composition of claim 71, wherein  $R_1$  is methyl.
73. (previously presented) The composition of claim 14, wherein  $R_4$ ,  $R_5$  and  $R_8$  are hydrogen,  $R_6$  and  $R_{10}$  are hydroxyl, and Y and Z together represent trans -CH=CH-.
74. (previously presented) The composition of claim 73, wherein  $R_1$  is methyl.
75. (currently amended) A pharmaceutical composition comprising a pharmaceutically suitable carrier or diluent and a compound having the structure:



or a pharmaceutically acceptable salt or ester or salt of ester thereof; wherein  $R_1$  is hydrogen,  $C_1$ - $C_{20}$  alkyl,  $C_2$ - $C_{20}$  alkenyl,  $C_2$ - $C_{20}$  alkynyl,  $C_1$ - $C_{20}$  heteroalkyl,  $C_2$ - $C_{20}$  heteroalkenyl,  $C_2$ - $C_{20}$  heteroalkynyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_3$ - $C_{20}$  cycloalkenyl,  $C_3$ - $C_{20}$

cycloalkynyl, C<sub>3</sub>-C<sub>20</sub> heterocycloalkyl, C<sub>3</sub>-C<sub>20</sub> heterocycloalkenyl, C<sub>3</sub>-C<sub>20</sub> heterocycloalkynyl, C<sub>3</sub>-C<sub>14</sub> aryl or C<sub>3</sub>-C<sub>14</sub> heteroaryl;

R<sub>2</sub> is methyl;

R<sub>3</sub> is hydrogen or halogen;

R<sub>4</sub> is hydrogen or halogen;

R<sub>5</sub> is hydrogen or an oxygen protecting group;

R<sub>6</sub> is hydrogen, hydroxyl, or hydroxyl with an oxygen protecting group;

n is 1;

R<sub>7</sub> is hydrogen;

R<sub>8</sub> is hydrogen, halogen, hydroxyl, hydroxyl with an oxygen protecting group, or alkyloxy;

R<sub>9</sub> is hydrogen, halogen, hydroxyl, hydroxyl with an oxygen protecting group, OR<sub>12</sub>, SR<sub>12</sub>, NR<sub>12</sub>R<sub>13</sub>,

-X<sub>1</sub>(CH<sub>2</sub>)<sub>p</sub>X<sub>2</sub>-R<sub>14</sub>, or is lower alkyl optionally substituted with hydroxyl, hydroxyl with an oxygen protecting group, halogen, amino, protected amino, or -X<sub>1</sub>(CH<sub>2</sub>)<sub>p</sub>X<sub>2</sub>-R<sub>14</sub>;

wherein R<sub>12</sub> and R<sub>13</sub> are, independently for each occurrence, hydrogen, C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>2</sub>-C<sub>20</sub> alkenyl, C<sub>2</sub>-C<sub>20</sub> alkynyl, C<sub>1</sub>-C<sub>20</sub> heteroalkyl, C<sub>2</sub>-C<sub>20</sub> heteroalkenyl, C<sub>2</sub>-C<sub>20</sub> heteroalkynyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkenyl, C<sub>3</sub>-C<sub>20</sub> cycloalkynyl, C<sub>3</sub>-C<sub>20</sub> heterocycloalkyl, C<sub>3</sub>-C<sub>20</sub> heterocycloalkenyl, C<sub>3</sub>-C<sub>20</sub> heterocycloalkynyl, C<sub>3</sub>-C<sub>14</sub> aryl or C<sub>3</sub>-C<sub>14</sub> heteroaryl; or a nitrogen or oxygen protecting group, or R<sub>12</sub> and R<sub>13</sub>, taken together may form a saturated or unsaturated cyclic ring of 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R<sub>12</sub> and R<sub>13</sub> are optionally further substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein X<sub>1</sub> and X<sub>2</sub> are each independently absent, or are oxygen, NH, or

-N(alkyl), or wherein X<sub>2</sub>-R<sub>14</sub> together are N<sub>3</sub> or are a saturated or unsaturated heterocyclic moiety;

p is 2-10, and

R<sub>14</sub> is hydrogen or a C<sub>3</sub>-C<sub>14</sub> aryl, C<sub>3</sub>-C<sub>14</sub> heteroaryl, C<sub>1</sub>-C<sub>20</sub> alkyl(C<sub>3</sub>-C<sub>14</sub>)aryl, or C<sub>1</sub>-C<sub>20</sub> alkyl(C<sub>3</sub>-C<sub>14</sub>)heteroaryl moiety, or is -(C=O)NHR<sub>15</sub>, -(C=O)OR<sub>15</sub>, or -(C=O)R<sub>15</sub>, wherein

each occurrence of  $R_{15}$  is independently hydrogen,  $C_1$ - $C_{20}$  alkyl,  $C_2$ - $C_{20}$  alkenyl,  $C_2$ - $C_{20}$  alkynyl,  $C_1$ - $C_{20}$  heteroalkyl,  $C_2$ - $C_{20}$  heteroalkenyl,  $C_2$ - $C_{20}$  heteroalkynyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_3$ - $C_{20}$  cycloalkenyl,  $C_3$ - $C_{20}$  cycloalkynyl,  $C_3$ - $C_{20}$  heterocycloalkyl,  $C_3$ - $C_{20}$  heterocycloalkenyl,  $C_3$ - $C_{20}$  heterocycloalkynyl,  $C_3$ - $C_{14}$  aryl or  $C_3$ - $C_{14}$  heteroaryl; or  $R_{14}$  is  $-SO_2(R_{16})$ , wherein  $R_{16}$  is a  $C_1$ - $C_{20}$  alkyl,  $C_2$ - $C_{20}$  alkenyl or  $C_2$ - $C_{20}$  alkynyl moiety, wherein one or more of  $R_{14}$ ,  $R_{15}$ , or  $R_{16}$  are optionally substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

$R_{10}$  is hydroxyl, hydroxyl with an oxygen protecting group, or amino;

$R_{11}$  is hydrogen;

X is O;

Y is  $CHR_{17}$  or  $CR_{17}$ ; and Z is  $CHR_{18}$  or  $CR_{18}$ ;

wherein each occurrence of  $R_{17}$  and  $R_{18}$  is hydrogen and wherein Y and Z may be connected by a single or double bond;

wherein oxygen protecting groups are selected from the group consisting of methyl ethers, methoxymethyl ether, methylthiomethyl ether, benzyloxymethyl ether, p-methoxybenzyloxymethyl ether, ethyl ethers, benzyl ethers, silyl ethers, trimethylsilyl ether, triethylsilyl ether, triisopropylsilyl ether, t-butyldimethylsilyl ether, tribenzyl silyl ether, t-butyldiphenyl silyl ether, esters, formate, acetate, benzoate, trifluoroacetate, dichloroacetate, carbonates, cyclic acetals and ketals and wherein nitrogen protecting groups are selected from the group consisting of carbamates, Troc 2,2,2-trichloroethoxycarbonyl, amides, cyclic imides, N-alkyl amines, N-aryl amines, imines, and enamines; and

wherein  $C_3$ - $C_{14}$  heteroaryl moieties are selected from cyclic aromatic moieties having from five to ten ring atoms of which one ring atom is selected from S, O and N; zero, one or two ring atoms are additional heteroatoms independently selected from S, O and N; and the remaining ring atoms are carbon.

76. (previously presented) The composition of claim 75, wherein:

R<sub>1</sub> is hydrogen, straight or branched lower alkyl, straight or branched lower heteroalkyl, or C<sub>3</sub>-C<sub>14</sub> aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more halogen, hydroxyl or hydroxyl with an oxygen protecting group;

R<sub>3</sub> is hydrogen;

R<sub>8</sub> is hydrogen;

R<sub>9</sub> is hydrogen, halogen, hydroxyl, hydroxyl with an oxygen protecting group, OR<sub>12</sub>, SR<sub>12</sub>, NR<sub>12</sub>R<sub>13</sub>,

-X<sub>1</sub>(CH<sub>2</sub>)<sub>p</sub>X<sub>2</sub>-R<sub>14</sub>, or is lower alkyl optionally substituted with hydroxyl, hydroxyl with an oxygen protecting group, halogen, amino, protected amino, or -X<sub>1</sub>(CH<sub>2</sub>)<sub>p</sub>X<sub>2</sub>-R<sub>14</sub>;

wherein R<sub>12</sub> and R<sub>13</sub> are, independently for each occurrence, hydrogen, lower alkyl, C<sub>3</sub>-C<sub>14</sub> aryl, C<sub>3</sub>-C<sub>14</sub> heteroaryl, alkyl(C<sub>3</sub>-C<sub>14</sub>)aryl, or alkyl(C<sub>3</sub>-C<sub>14</sub>)heteroaryl, or a nitrogen or oxygen protecting group, or R<sub>12</sub> and R<sub>13</sub>, taken together may form a saturated or unsaturated cyclic ring of 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R<sub>12</sub> and R<sub>13</sub> are optionally further substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein X<sub>1</sub> and X<sub>2</sub> are each independently absent, or are oxygen, NH, or -N(alkyl), or

wherein X<sub>2</sub>-R<sub>14</sub> together are N<sub>3</sub> or are a saturated or unsaturated heterocyclic moiety,

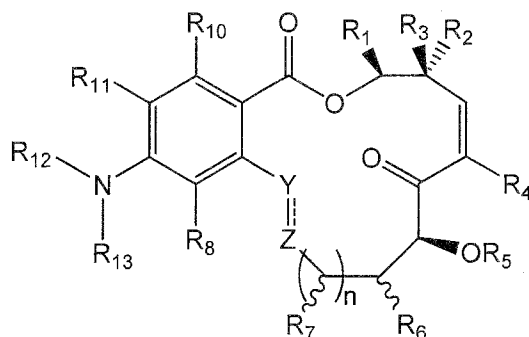
p is 2-10, and

R<sub>14</sub> is hydrogen, or a C<sub>3</sub>-C<sub>14</sub> aryl, C<sub>3</sub>-C<sub>14</sub> heteroaryl, alkyl(C<sub>3</sub>-C<sub>14</sub>)aryl, or alkyl(C<sub>3</sub>-C<sub>14</sub>)heteroaryl moiety, or is -(C=O)NHR<sub>15</sub>, -(C=O)OR<sub>15</sub>, or -(C=O)R<sub>15</sub>, wherein each occurrence of R<sub>15</sub> is independently hydrogen, alkyl, heteroalkyl, C<sub>3</sub>-C<sub>14</sub> aryl, C<sub>3</sub>-C<sub>14</sub> heteroaryl, alkyl(C<sub>3</sub>-C<sub>14</sub>)aryl, or alkyl(C<sub>3</sub>-C<sub>14</sub>)heteroaryl, or R<sub>14</sub> is -SO<sub>2</sub>(R<sub>16</sub>), wherein R<sub>16</sub> is an alkyl moiety, wherein one or more of R<sub>14</sub>, R<sub>15</sub>, or R<sub>16</sub> are optionally substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; and R<sub>10</sub> is hydroxyl.

77. (canceled)



78. (previously presented) The composition of claim 76, where  $R_4$  is halogen.
79. (previously presented) The composition of claim 76, where  $R_4$  is hydrogen.
80. (previously presented) The composition of claim 76, where Y and Z together represent  $-\text{CH}=\text{CH}-$ .
81. (previously presented) The composition of claim 76, where Y and Z together represent trans  $-\text{CH}=\text{CH}-$ .
82. (previously presented) The composition of claim 76, wherein  $R_1$  is methyl.
83. (canceled)
84. (previously presented) The composition of claim 82, wherein  $R_4$  is halogen.
85. (previously presented) The composition of claim 82, wherein Y and Z together represent  $-\text{CH}=\text{CH}-$ .
86. (previously presented) The composition of claim 82, wherein  $R_4$  is hydrogen and Y and Z together represent  $-\text{CH}=\text{CH}-$ .
87. (previously presented) The composition of claim 85 or 86 wherein  $-\text{CH}=\text{CH}-$  is trans.
88. (currently amended) A pharmaceutical composition comprising a pharmaceutically suitable carrier or diluent and a compound having the structure:



or a pharmaceutically acceptable salt or ester or salt of ester thereof; wherein

R<sub>1</sub> is hydrogen, straight or branched lower alkyl, straight or branched lower heteroalkyl, or C<sub>3</sub>-C<sub>14</sub> aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more halogen, hydroxyl or hydroxyl with an oxygen protecting group;

R<sub>2</sub> is methyl;

R<sub>3</sub> is hydrogen or halogen;

R<sub>4</sub> is hydrogen or halogen;

R<sub>5</sub> is hydrogen or an oxygen protecting group;

R<sub>6</sub> is hydrogen, hydroxyl, or hydroxyl with an oxygen protecting group;

n is 1;

R<sub>7</sub> is hydrogen;

R<sub>8</sub> is hydrogen, halogen, hydroxyl, hydroxyl with an oxygen protecting group, or alkyloxy;

R<sub>12</sub> and R<sub>13</sub> are, independently for each occurrence, hydrogen, lower alkyl, C<sub>3</sub>-C<sub>14</sub> aryl, C<sub>3</sub>-C<sub>14</sub> heteroaryl, alkyl(C<sub>3</sub>-C<sub>14</sub>)aryl, or alkyl(C<sub>3</sub>-C<sub>14</sub>)heteroaryl, or a nitrogen or oxygen protecting group, or R<sub>12</sub> and R<sub>13</sub>, taken together may form a saturated or unsaturated cyclic ring of 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R<sub>12</sub> and R<sub>13</sub> are optionally further substituted with one or more hydroxyl, hydroxyl with an oxygen protecting group, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

R<sub>10</sub> is hydroxyl, hydroxyl with an oxygen protecting group, or amino;

R<sub>11</sub> is hydrogen;

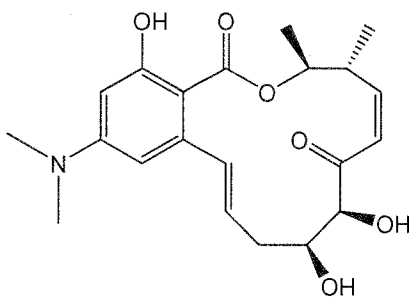
Y is CHR<sub>17</sub> or CR<sub>17</sub>; and Z is CHR<sub>18</sub> or CR<sub>18</sub>;

wherein each occurrence of R<sub>17</sub> and R<sub>18</sub> is hydrogen, wherein Y and Z may be connected by a single or double bond;

wherein oxygen protecting groups are selected from the group consisting of methyl ethers, methoxymethyl ether, methylthiomethyl ether, benzyloxymethyl ether, p-methoxybenzyloxymethyl ether, ethyl ethers, benzyl ethers, silyl ethers, trimethylsilyl ether, triethylsilyl ether, triisopropylsilyl ether, t-butyldimethylsilyl ether, tribenzyl silyl ether, t-butyldiphenyl silyl ether, esters, formate, acetate, benzoate, trifluoroacetate, dichloroacetate, carbonates, cyclic acetals and ketals and wherein nitrogen protecting groups are selected from the group consisting of carbamates, ~~Troc 2,2,2-trichloroethoxycarbonyl~~, amides, cyclic imides, N-alkyl amines, N-aryl amines, imines, and enamines; and

wherein C<sub>3</sub>-C<sub>14</sub> heteroaryl moieties are selected from cyclic aromatic moieties having from five to ten ring atoms of which one ring atom is selected from S, O and N; zero, one or two ring atoms are additional heteroatoms independently selected from S, O and N; and the remaining ring atoms are carbon.

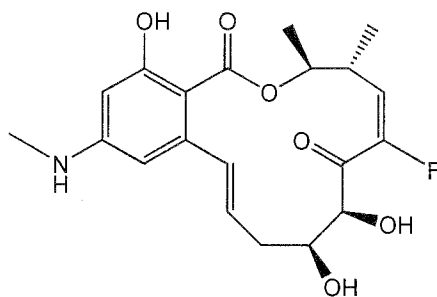
89. (canceled)
90. (previously presented) The composition of claim 88, wherein R<sub>4</sub> is halogen.
91. (previously presented) The composition of claim 88, wherein Y and Z together represent -CH=CH-.
92. (previously presented) The composition of claim 88, wherein R<sub>1</sub> is methyl.
93. (previously presented) The composition of claim 88, wherein R<sub>1</sub> is methyl, R<sub>4</sub> is hydrogen, and Y and Z together represent -CH=CH-.
94. (previously presented) The composition of claim 91 or 93, wherein -CH=CH- is trans.
95. (previously presented) The composition of claim 88, wherein the compound has the structure:



or a pharmaceutically acceptable salt or ester thereof.

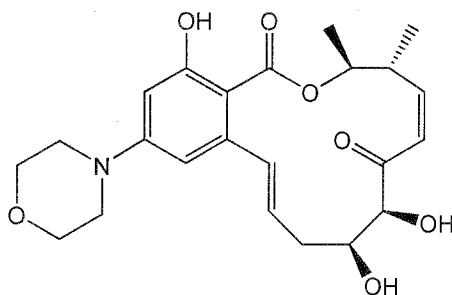
96. (canceled)

97. (previously presented) The composition of claim 88, wherein the compound has the structure:



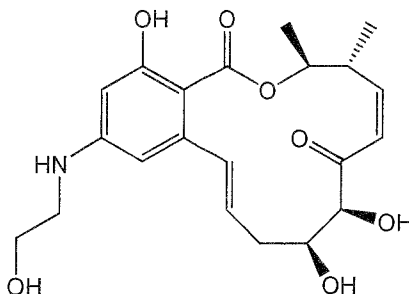
or a pharmaceutically acceptable salt or ester thereof.

98. (previously presented) The composition of claim 88, wherein the compound has the structure:



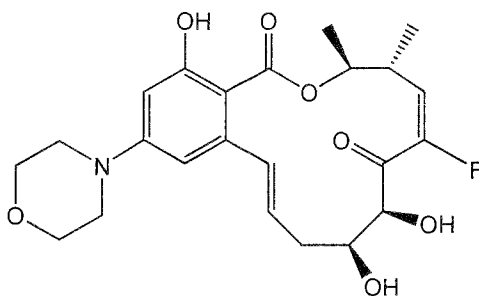
or a pharmaceutically acceptable salt or ester thereof.

99. (previously presented) The composition of claim 88, wherein the compound has the structure:



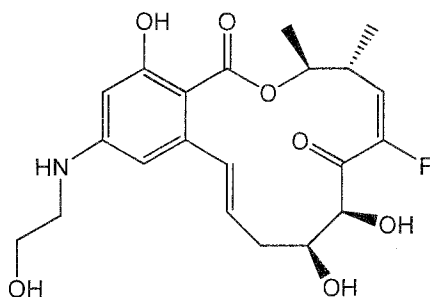
or a pharmaceutically acceptable salt or ester thereof.

100. (previously presented) The composition of claim 88, wherein the compound has the structure:



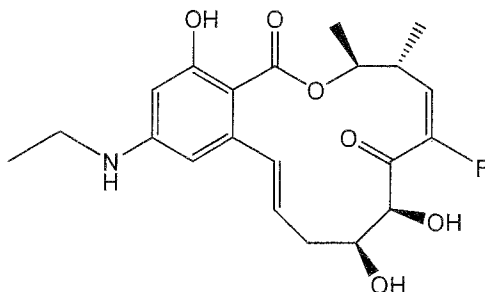
or a pharmaceutically acceptable salt or ester thereof.

101. (previously presented) The composition of claim 88, wherein the compound has the structure:



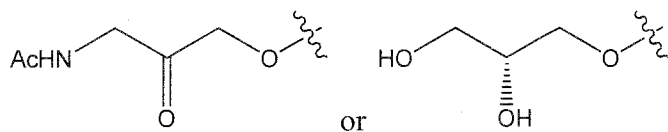
or a pharmaceutically acceptable salt or ester thereof.

102. (previously presented) The composition of claim 88, wherein the compound has the structure:

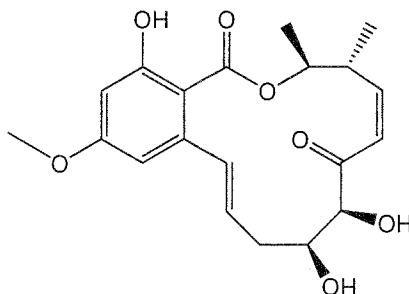


or a pharmaceutically acceptable salt or ester thereof.

103. (previously presented) The composition of claim 76, where  $R_1$  is methyl.
104. (previously presented) The composition of claim 76, where  $R_4$  is halogen.
105. (previously presented) The composition of claim 76, where  $R_4$  is hydrogen.
106. (previously presented) The composition of claim 76, where  $R_5$  is hydrogen.
107. (previously presented) The composition of claim 76, where  $R_6$  is hydroxyl.
108. (previously presented) The composition of claim 75, where  $R_8$  is hydrogen.
109. (previously presented) The composition of claim 76, where  $R_9$  is hydroxyl, hydroxyl with an oxygen protecting group,  $-OR_{12}$ ,  $-NR_{12}R_{13}$ , or  $-O(CH_2)_pX_2-R_{14}$ , wherein  $R_{12}$ ,  $R_{13}$ ,  $R_{14}$  and  $X_2$  are as defined in claim 76.
110. (currently amended) The composition of claim 109, where  $R_9$  is  $-OR_{12}$ , wherein  $R_{12}$  is methyl, ethyl, propyl, isopropyl, butyl, Bn benzyl, PMB (MPM) para-methoxybenzyl, 3,4-ClBn 3,4-dichlorobenzyl, or  $R_9$  is

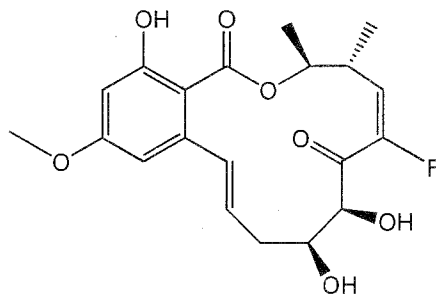


111. (previously presented) The composition of claim 75 wherein the compound has the structure:



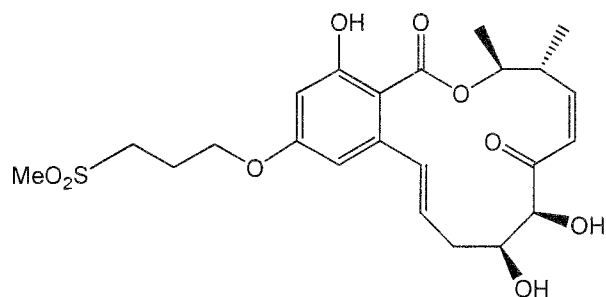
or a pharmaceutically acceptable salt or ester thereof.

112. (previously presented) The composition of claim 75 wherein the compound has the structure:



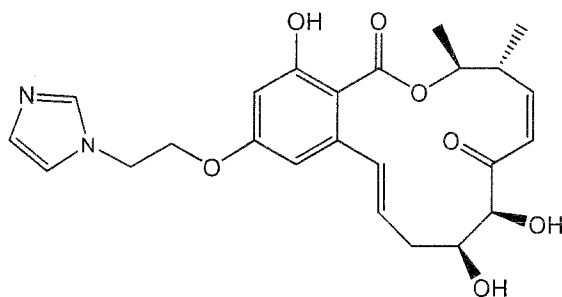
or a pharmaceutically acceptable salt or ester thereof.

113. (previously presented) The composition of claim 75 wherein the compound has the structure:



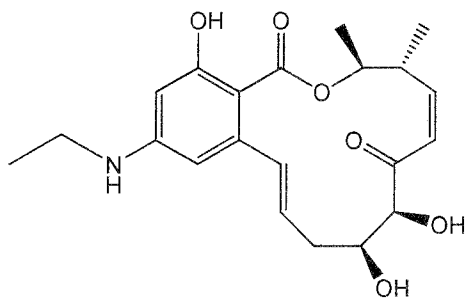
or a pharmaceutically acceptable salt or ester thereof.

114. (previously presented) The composition of claim 75 wherein the compound has the structure:



or a pharmaceutically acceptable salt or ester thereof.

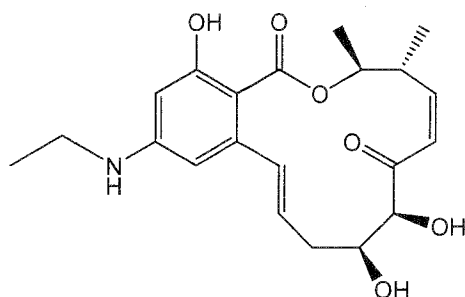
115. (previously presented) A pharmaceutical composition comprising a pharmaceutically suitable carrier or diluent and a compound having the structure:



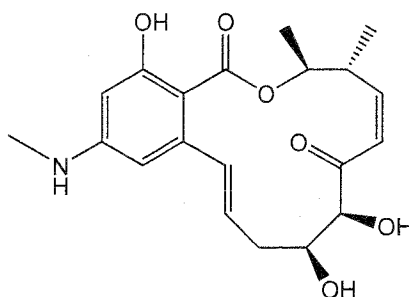
or a pharmaceutically acceptable salt, ester, or salt of ester thereof.



116. (previously presented) The composition of claim 115, wherein the compound is:

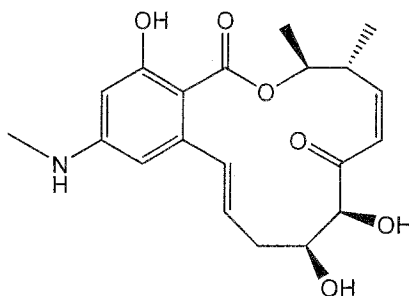


117. (previously presented) A pharmaceutical composition comprising a pharmaceutically suitable carrier or diluent and a compound having the structure:



or a pharmaceutically acceptable salt, ester, or salt of ester thereof.

118. (previously presented) The composition of claim 117, wherein the compound is:



119. (previously presented) The composition of claim 76, wherein  $R_4$ ,  $R_5$  and  $R_8$  are hydrogen,  $R_6$  and  $R_{10}$  are hydroxyl, and Y and Z together represent trans -CH=CH-.
120. (previously presented) The composition of claim 119, wherein  $R_1$  is methyl.
121. (previously presented) The composition of claim 88, wherein  $R_4$ ,  $R_5$  and  $R_8$  are hydrogen,  $R_6$  and  $R_{10}$  are hydroxyl, and Y and Z together represent trans -CH=CH-.
122. (previously presented) The composition of claim 121, wherein  $R_1$  is methyl.
123. (previously presented) The composition of claim 8, wherein  $R_4$  is hydrogen.
124. (previously presented) The composition of claim 14, wherein  $R_4$  is hydrogen.
125. (previously presented) The composition of claim 82, wherein  $R_4$  is hydrogen.
126. (previously presented) The composition of claim 88, wherein  $R_4$  is hydrogen.